



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/019,690

01/04/2002

Katsuhiko Hiramatsu

L9289.01229

7794

24257

7590

10/05/2005

STEVENS DAVIS MILLER & MOSHER, LLP

1615 L STREET, NW

SUITE 850

WASHINGTON, DC 20036

EXAMINER

YANG, LINA

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/019,690		HIRAMATSU, KATSUHIKO	
	Examiner		Art Unit	
	Lina Yang		2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/4/2002, 5/29/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claim 4 is objected to because of the following informalities.

Claim 4 line17, --both claim 1 and claim 2 should be inserted in the place of "claim 2", since claim 2 depends on claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351 (a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Lundby (U.S. Patent Application No. 20020141505 A1).

Regarding claims 1 and 5, Lundby teaches a communication terminal apparatus (fig. 1) comprising:

signal point arranging means (controller in fig. 1) for arranging signal points based on power ratio information which is a ratio of transmission power of a common known signal (common pilot channel has a constant power, therefore signal E_p is "known"; fig. 4; [0023] - [0027]), to transmission power of a signal included in a channel

Art Unit: 2665

that does not have a known signal (E_d for dedicated traffic channel or E_c for common traffic channel; which vary over time, therefore "unknown"; fig. 4; [0024] - [0027]); and

demodulating means for performing quadrature amplitude demodulation of received data based on the signal points arranged by said signal point arranging means ([0028]).

Regarding claim 2, Lundby further teaches that the communication terminal apparatus further comprising extracting means (controller in fig. 1) for extracting the power ratio information included in signals transmitted from a base station apparatus, wherein said signal point arranging means arranges the signal points based on the power ratio information extracted by said extracting means ([0028]).

Regarding claim 4, Lundby teaches a base station apparatus (fig. 1A and corresponding description [0017]) comprising:

modulating means for switching a modulation method according to an estimated channel condition and modulating transmit data (100 in fig. 1A; [0022]);

power ratio information calculating means (controller 150 in fig. 1A and fig. 5; [0030])) for calculating power ratio information which is a ratio of transmission power of a common known signal to transmission power of a signal included in a channel that does not have a known signal; and

transmitting means (110 in fig. 1A) for transmitting calculated power ratio information to the communication terminal apparatus according to claim 2 ([0028]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Lundby (U.S. Patent Application No. 20020141505 A1).

Regarding claim 3, Lundby teaches a communication terminal apparatus comprising:

signal point arranging means (controller in fig. 1) for arranging signal points based on power ratio information which is a ratio of transmission power of a common known signal (common pilot channel has a constant power, therefore signal E_p is "known"; fig. 4; [0023] - [0027]), to transmission power of a signal included in a channel that does not have a known signal (E_d for dedicated traffic channel or E_c for common traffic channel; which vary over time, therefore "unknown"; fig. 4; [0024] - [0027]); and

demodulating means for performing quadrature amplitude demodulation of received data based on the signal points arranged by said signal point arranging means ([0028]).

Lundby differs from the claimed invention in that Lundby does not specifically teach that the power ratio is an average power ratio. However, examiner takes an official notice that it's well known in the art that average values are commonly used for more accurate results. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include signal point arranging means for arranging signal points based on an average power ratio which is a ratio of reception power of a common known signal transmitted from a base station apparatus to an average value for each processing timing of reception power of signals included in a channel that does not have a known signal; and demodulating means for performing quadrature amplitude demodulation of received data based on signal points arranged by said signal point arranging means, in order to more accurately arranging the signal points and demodulating the received signals.

Art Unit: 2665


Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lina Yang whose telephone number is (571)272-3151. The examiner can normally be reached Monday through Thursday between 8:00 a.m. and 7:00 p.m. eastern standard time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 517-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LY


HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600